Work Order ID 94216 Page 1 November-30-12 10:14:12 AM D2171 Item ID: Accept \*N900040100\* Setup Start **Revision ID:** Stop Item Name: Clamp Start Qty: 8.00 **Start Date:** 11/30/12 **Cust Item ID: Req'd Qty:** 8.00 Required Date: 12/14/12 **Customer:** Reference: Start Run Process Plan: MLJ Date: 17-17-04 Tooling: Approvals: Date: Stop Date: SPC (Y/N): Date: Sequence ID/ Reject Operation Set Up/ **Tool ID** Tool # Plan Accept Reject Insp. **Description** Number Stamp Work Center ID Code Qty Qty **Run Hours** Draw Nbr **Revision Nbr** D2171 Rev D 100 0.00 **PURCHASING** \*100\* B12-12-11 Waterjet 0.00 Memo FLOW CNC Waterjet 1-Cut as per Dwg Dwg Rev: D 304 1063 Prog Rev: \(\overline{\chi}\) 2-Deburr if necessary

0.00

0.00

B12-17-11

110

QC

\*110\*

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C	100	VFORM	MANCE / UP	DATE	OA Classel	Data	
											QA Closed:	Date	
Work Orde	or.					DISPOSITION				AGAINST DE	PARTMENT		
WORK OTAL	- '					Rework	1		Skid-tube Crosstube		Water Jet		Engineering
Part I	No.				i	Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	-					Use-as-is	1	t e	noforming	Finishing	4	re/Packaging	Other
NCR I	۷o.					Work Order Update	1		Large Fab	Composite	1	Supplier	
Root	ļ					ption of work order update	1	Initial		tion	Sign &		
Cause	$\dashv$	Date	Step	Qty	(	or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data	Ш												
Equip/Tooling	Ш												
Operator													
Material	Ш												
Setup							l						
Other	Ц												
Process	Ш			·									
Supplier	Ц												
Training	Ц												•
Unapproved		٠				***************************************					<u> </u>	<u> </u>	
						······································	AUL	T CATE	GORY				
Landi	_					General	_	,			7	_	<del></del> 3
	—	Bending				Bend	L	Grain			Ovalized		Pressure/Forced
	-	Centre No	t Concer	ntric to	o/s	BOM/Route	L	Hardwa	re		Over/Under	tolerance	Temperature/Cure
	ш	Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
	⊢—	Crushed/0	Crimped.			Burrs	_	-1	ions Incomplete/	Unclear	Part Lost/M	issing	Wrong Stock Pulled
	Ш	Cuffs				Contamination		Mainte	nance		Part Moved		
	Ш	Heat Trea	t		L	Countersink		Mislabe	led		Positioned \		
		Inspection	Strip in	Tube		Cut Too Short	1	Misread	ł		Power Loss	/Surge	Other

Offset

Out of Calibration
Out of Sequence

Outside Dimensions

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish Folio

QC5- Inspect part completeness to step on W/O

Memo

140

QC

\*140\*

Quality Control

NCR:	⁄es	/ No				WORK ORDER NON-C	O	VFORM	MANCE / UPDATE		•		-	
											QA Closed:	Dat	te:	
Work Orde	or.					DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part N	Part No					Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube  Machining Small Fab  Thermoforming Finishing  Large Fab Composite			Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier			Engineering Quality Other
Root					Descri	ption of work order update		Initial	Action		Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Description		Date	Verification	n	QC Inspector
Doc/Data						·								
Equip/Tooling														•
Operator														
Material														
Setup														
Other					-									
Process							1						ļ	
Supplier														
Training														
Unapproved														
						F	AUI	T CATE	GORY	·				
Landi	ng (	Gear				General		_			_			
1	Bending				Bend		Grain			Ovalized		L	Pressure/Forced	
	Centre Not Concentric to O/S		o/s	BOM/Route		] Hardwa	re		Over/Under tolerance			Temperature/Cure		
	Cracks		Broken/Damaged	Inspection Incomplete			Part Incorrect			Weld				
	Crushed/Crimped.					Burrs		Instruct	ions Incomplete/Unclear		Part Lost/M	issing		Wrong Stock Pulled

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish Folio DQA:

Part Moved
Positioned Wrong

Power Loss/Surge

Other

Date:

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cuffs

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

	Work Order ID 94216  November-30-12 10:14:12 AM			*942				Page 3
Item ID: Revision ID: Item Name:	D2171 Clamp		i <u> </u>	Accept	*N900040100	<b>)*</b> Setup	Start *NS	S1* S2*
Start Date: Required Date: Reference:	11/30/12 12/14/12	Start Qty: 8.00 Req'd Qty: 8.00	*8* *8*		Cust Item ID: Customer:			
Approvals:	Process Pla	an:	Date:	Tooling: _	Date:	Run	Start *NF	₹1*
	QC:		Date:	SPC (Y/N):	Date:		*NF	₹2*
Sequence ID/ Work Center II	D	Operation Description Identify as per dwg & Ste	ock Location \$745	Set Up/ Run Hours  0.00	Tool ID Tool # Plan Code	Accept Re Qty Qty	ject Reject y Number	Insp. Stamp
*150* Packaging Packaging		Мето		0.00		19× _	B	-SP -01-08
160		QC21- Final Inspection	Work Order Release	0.00			63 l. l.	20
*160*		Memo		0.00			13/1/10	70

Quality Control

13/1/10 /25 MLS 13-01-08

									DQA:	Date:	
NCR: Yes	s / No				WORK ORDER NON-C	CONFORM	MANCE / UP		QA Closed:	Date:	
Work Order:					DISPOSITION			AGAINST DE	PARTMENT	PROCESS	
Part No.	•			······································	Rework Scrap Use-as-is Work Order Update	Therm	Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty	c	or Non-conformance	Chief Eng	Desc	cription	Date	Verification	QC Inspector
oc/Data											
quip/Tooling	]							1			
perator											
//aterial	]										
etup											
Other									:	,	
rocess											
upplier	]										
raining	1										

**FAULT CATEGORY** 

Grain

Hardware

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Inspection Incomplete

Instructions Incomplete/Unclear

Ovalized

Part Incorrect

Part Moved
Positioned Wrong

Part Lost/Missing

Power Loss/Surge

Over/Under tolerance

Pressure/Forced

Weld

Other

Temperature/Cure

Wrong Stock Pulled

General

Bend

Burrs

BOM/Route

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Broken/Damaged

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Unapproved

**Landing Gear** 

Bending

Cracks

Cuffs

Heat Treat

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Centre Not Concentric to O/S

**Picklist Print** 

November-30-12 10:14:11 AM

Page 1

Work Order ID:

94216

Parent Item:

D2171

Parent Item Name:

Clamp

**Start Date:** 11/30/12

Required Date: 12/14/12

Start Qty: 8.00

Required Qty: 8.00

Comments:

IPP REV:A 11.04.26 now made in house DD verf:EC

mponent Item ID/ m Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
04S16GA / 1/316 Sheet .063		Purchased	No		* ************************************	100	sf	184.0780	0.0258	0.2172632	B12	-12-11	
				<b>Location</b>		Loc Oty	Lo	c Code				1	
				MAT020		184.078					An RG	1	
				<u></u>	245	6.578			<del></del>	(		)	
				<u></u>	<sup>245</sup> 136	6.578 177.5			133	13/2		)	

				•								DQA:	Date	e:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	VFORN	/IANCE / UP	DATE		·		-	*
						·						QA Closed:	Date	e:_	
Work Orde	or.	•				DISPOSITION				AGAINST D	EP	PARTMENT	PROCESS		
WOIK OIG	٠	·			<del>,</del>	Rework	1		Skid-tube Crosstube			Water Jet			Engineering
Part N	No.					Scrap			Machining	Small Fab	1	Prod. Eng. Coor.			Quality
	•				-				Finishing	٦		e/Packaging	ヿ	Other	
NCR I	Vo.					Work Order Update Large Fab Composite					Supplier				
Root					Descri	tion of work order update		Initial	Ac	tion	1	Sign &			
Cause	Date Step Qty			C	or Non-conformance	Ch	nief Eng	Desc	ription		Date	Verification		QC Inspector	
Doc/Data					, , , , ,				-						
Equip/Tooling														- 1	
Operator															
Material															
Setup	Ш														
Other	Ш										1				
Process				•											
Supplier			l												
Training	Ш														
Unapproved															
						<u> </u>	AUI	LT CATE	GORY						
Landi	ng G	Gear			·	General		-		_		•	-		•
	Ш	Bending				Bend		Grain		Ĺ	_	Ovalized			Pressure/Forced
		Centre No	ot Concer	ntric to O	/S	BOM/Route		Hardwa	re			Over/Under	tolerance		Temperature/Cure
•	Ш	Cracks				Broken/Damaged	L	Inspecti	on Incomplete			Part Incorre	ct		Weld
	Crushed/Crimped.		Burrs		Instruct	ions Incomplete	'Unclear		Part Lost/Mi	issing		Wrong Stock Pulled			
	Ш	Cuffs				Contamination		Mainte	nance			Part Moved			
	Ш	Heat Trea	it			Countersink	$\perp$	Mislabe	led			Positioned V	Vrong		•
		Inspection	n Strip in	Tube		Cut Too Short		Misread	l	L		Power Loss/	Surge		Other
		Ripples in	pples in Bend			Drill Holes	1	Offset							

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

DART AEROSPACE LTD	Work Order:	94216
Description: Clamp	Part Number:	D2171
Inspection Dwg: D2171 Rev: D		Page 1 of 1

	FIRS	ARTICLE I	NSPECT	ON CH	ECKLIST	
	X	First Art	icle	Prot	otype	
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.257	+0.006/-0.001	, 260	2		V BUZ	
0.75	+/-0.030	,754	2		V	
0.40	+/-0.030	,407	2		V	
4.968	+/-0.010	4.965	2		V	
4.158	+/-0.010	4.154	7		V	
easured by:	7	Audited by:			Prototype Appro	oval: N/A

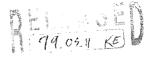
	/ DA 2\		
Measured by:	Audited by: (09)	Prototype Approval:	N/A
Date: (2-,2-(	Date: 12-12-11	Date:	N/A

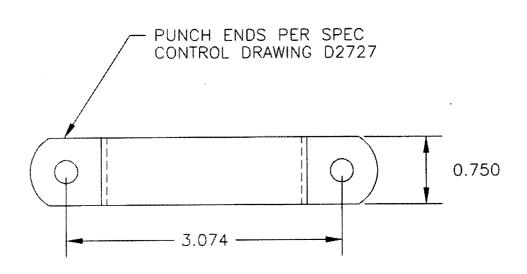
Rev	Date	Change	Revised by	Approved
Α	08.06.16	New Issue	KJ/DD	X
	-			

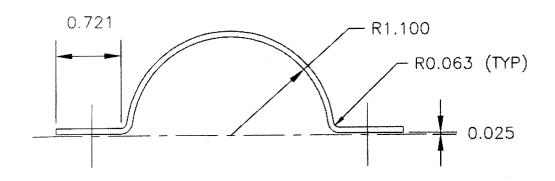




	DESIG	ŠW	DRAWN BY	DART AEROSPACE LTD	
	1	UW	771	HAWKESBURY, ONTARIO, CANADA	
,	CHECH	(ED / A	APPROYED	DRAWING NO.	REV. D
			KE	D2171 SHEET	1 OF 1
	DATE		<del>V</del>	TITLE	SCALE
	99.0	3.08		CLAMP	1:1
	В		96.01.29	REDRAWN	
	С		97.05.14	RADIUS CHANGED, CUSHION ADDED	
	D		99.03.08	REMOVE CUSHION (TSR A890)	







MATERIAL: 304/316 SS 0.063 THICK FLAT LENGTH: 4.968 END-END 4.158 HOLE-HOLE